

What is claimed is:

1. A production process for a hydroxyalkyl (meth)acrylate, which comprises the step of carrying out a reaction between (meth)acrylic acid and an alkylene oxide in the presence of a catalyst in order to produce the hydroxyalkyl (meth)acrylate;

5 with the production process further comprising the step of recovering the catalyst as has been used for the reaction.

10 2. A production process according to claim 1, wherein the catalyst-recovering step includes the step of causing an ion-exchange resin to adsorb the catalyst as contained in a residue as left behind distilling off the objective hydroxyalkyl (meth)acrylate from the resultant reaction liquid.

15 3. A production process according to claim 2, wherein the adsorption is carried out under mixing of the residue, the ion-exchange resin, and a polar solvent.

4. A production process according to claim 2, wherein the ion-exchange resin is a cation-exchange resin.

20

5. A production process according to claim 1, wherein the catalyst-recovering step includes the step of mixing a solid with an acid, wherein the solid is a product obtained by applying solid-liquid separation to a mixture of the resultant reaction liquid and/or its residue with water and/or an alkali solution, 25 wherein the residue is a residue as left behind distilling off the objective hydroxyalkyl (meth)acrylate from the reaction liquid.

6. A production process according to claim 5, wherein: the mixture of the

reaction liquid and/or its residue with the water and/or alkali solution is put in a state of high temperature; and/or the resultant mixture of the solid and the acid is put in a state of high temperature.

5 7. A production process according to claim 1, wherein the catalyst-recovering step includes the step of obtaining a residue as left behind distilling off the objective hydroxyalkyl (meth)acrylate from the resultant reaction liquid, with the production process further comprising the step of replenishing the resultant residue with a fresh catalyst to use the resultant mixture for the next
10 reaction.

8. A production process according to claim 1, wherein the catalyst is a chromium compound.